

## **CHECKER-BOARD OPTICAL CROSS-CONNECT**

### **ABSTRACT OF THE INVENTION**

The present invention is a three-dimensional optical cross-connect switch that includes a first optical switching array and a second optical switching array. When combined, the first and second arrays have collimator tiles and beam steering tiles disposed in a checker-board arrangement. The maximum deflection angle of the switch is less than or equal to the maximum deflection angle of either individual switching array. The tiling scheme of the present invention effectively increases the port count of a three-dimensional optical cross-connect switch without increasing the angular deflection required to access all of the pixels in the switch.